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FIGURE 2

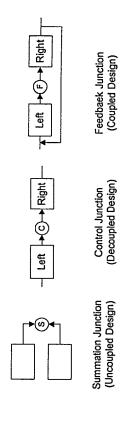


FIGURE 3

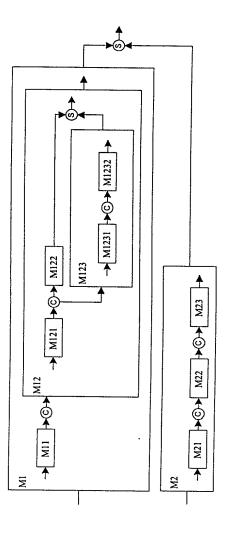


FIGURE 4

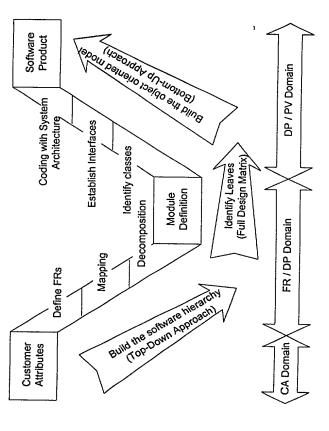


FIGURE 5

Object (= FR)	Attributes/ Data Structure (= DP)	Method (FRi = Aji DPj)

FIGURE 6

Class:

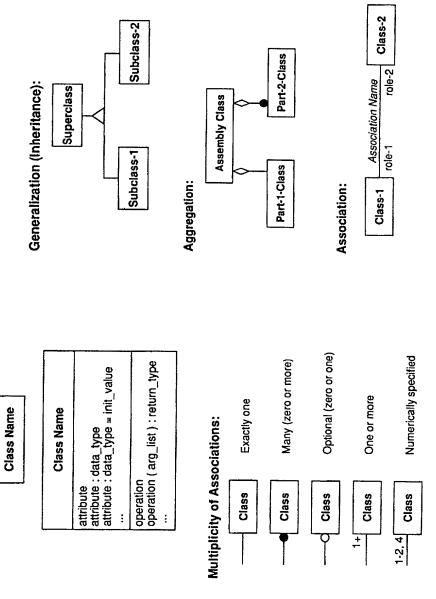


FIGURE 7

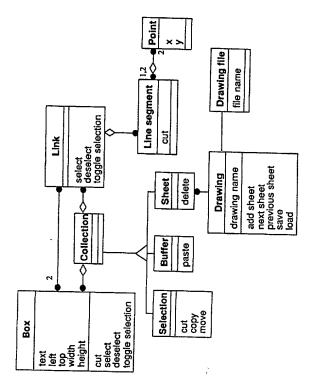


FIGURE 8

Person

name: string age: integer

(Person)
Bob Powers

(Person)
Derrick Tate
28

Class Diagram

Instance Diagram

FIGURE 9

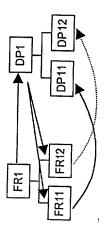


FIGURE 10

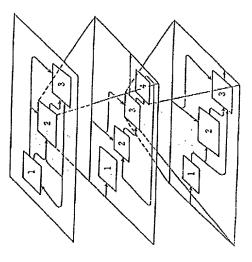


FIGURE 11

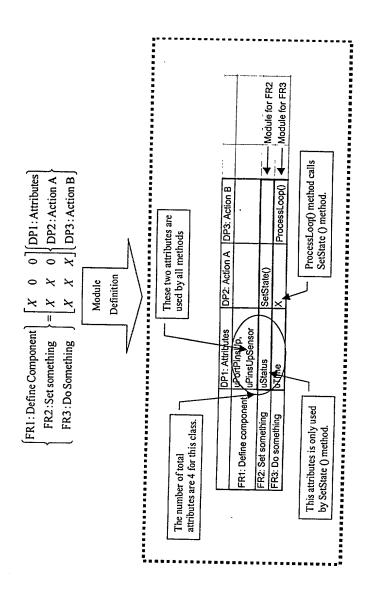


FIGURE 12

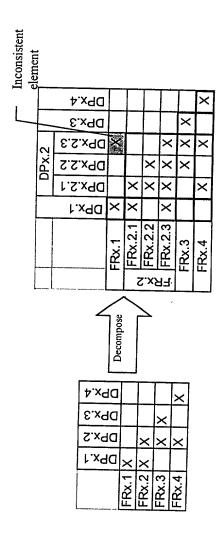


FIGURE 13

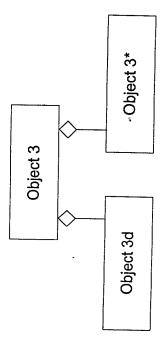
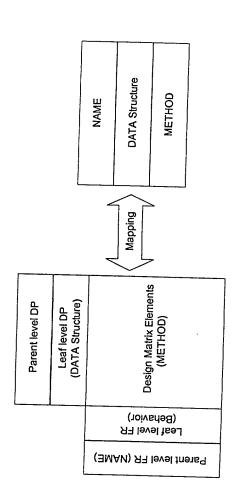


FIGURE 14



(b) Class Diagram

(a) Full Design Matrix Table

FIGURE 15

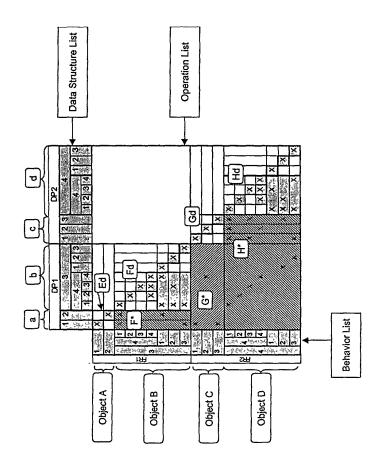


FIGURE 16

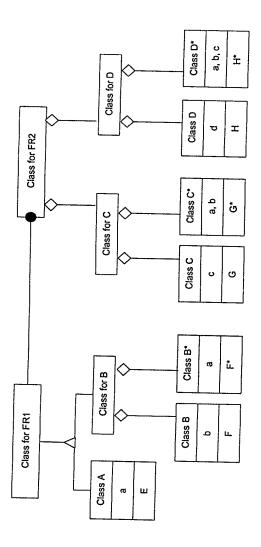


FIGURE 17

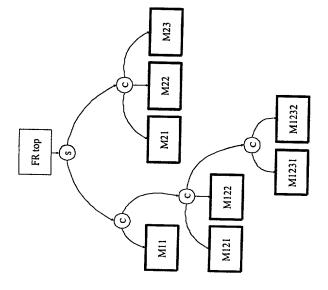


FIGURE 18

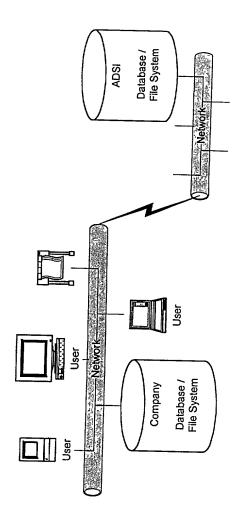


FIGURE 19

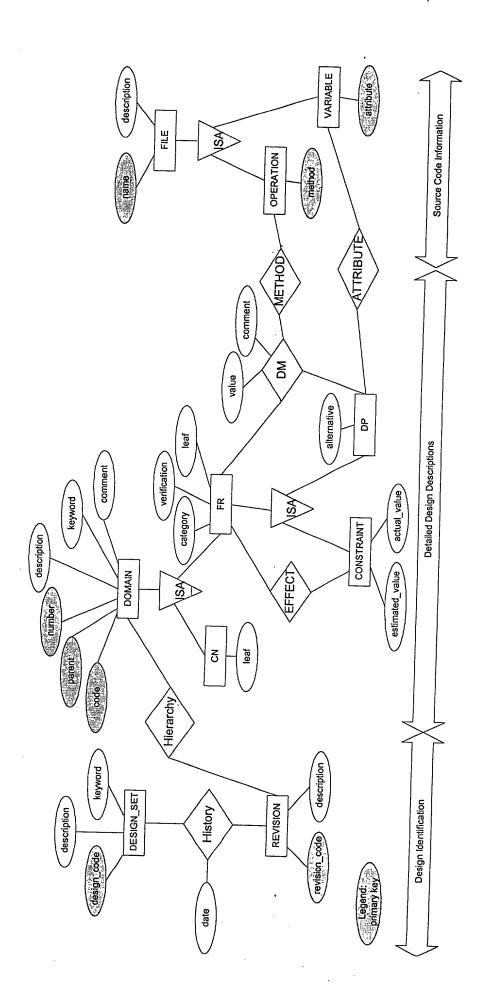


FIGURE 20

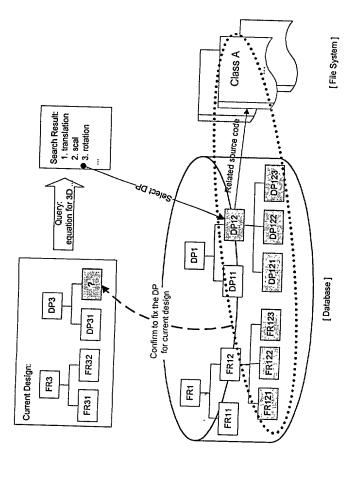


FIGURE 21

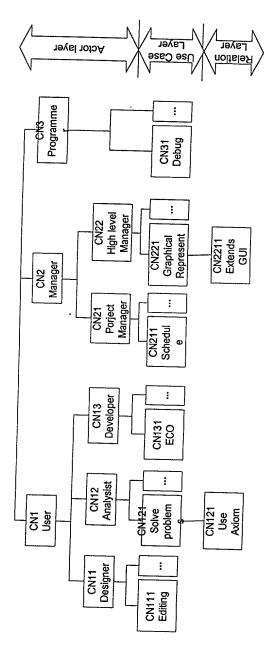


FIGURE 22

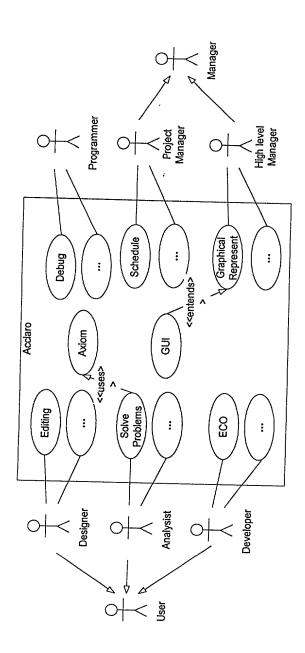


FIGURE 23

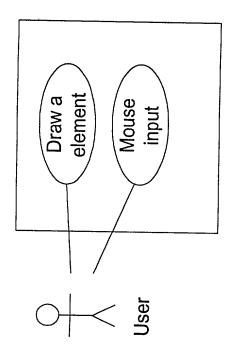


FIGURE 24

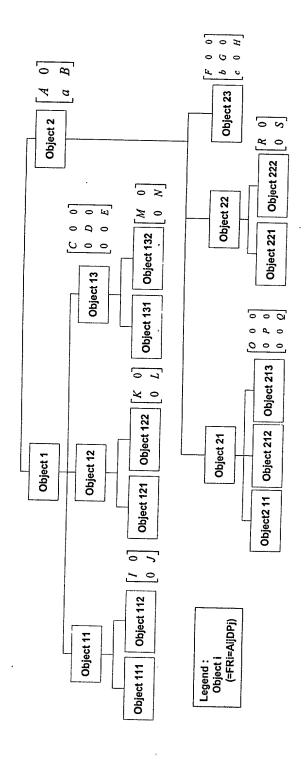


FIGURE 25

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	×	DP22:	Mouse	click	inform	ation	SSS: Event for release				L	L		~9EQ\$\$, [4.54	Ø.		7	
	with		<u>š</u>	ਹ	Ξ.	Ö	P221: Event for push							山	П	٥			1	
	ij			<u></u>	0	ည	P213: Circle button	a	Τ						i c	-		×		
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L	ద			_		۵	P211: Line button	a L	₩ W			씾		0		×		×	ပ	:
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7	arac		<u>R</u>		흥	teri	P121: Upper left point			V				5. P	Ď.	i ×		X		-
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		ద	<u> </u>	유	teri	"	P111: Start point		遊				- Company					×	a	
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FIGURE 26

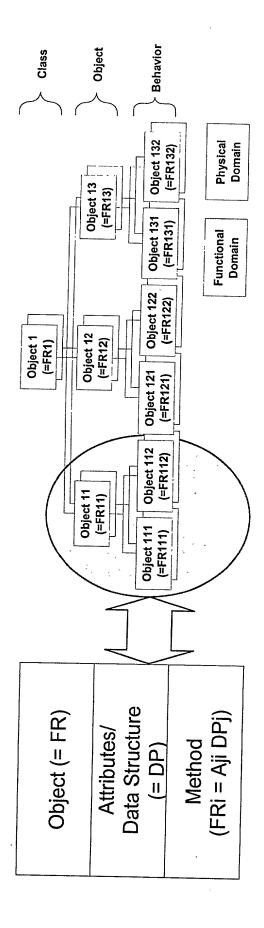


FIGURE 27

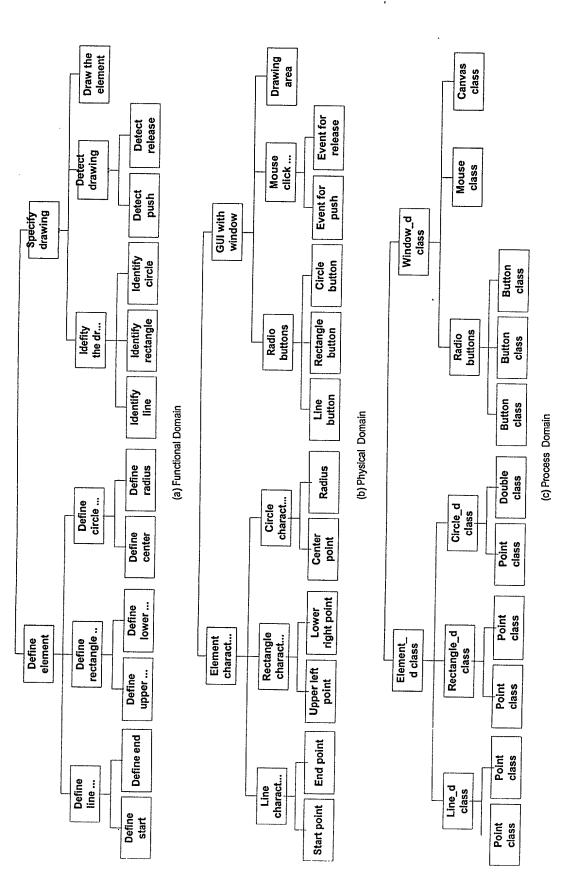


FIGURE 28

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	Off-diagonal eleme or lower level (2005)	nt for the leaf	DP111: Start point	DP112: End point	DP121: Upper left point	DP122: Lower right point	DP131: Center point	dP132: Radius	DP211: Line button	DP212: Rectangle button	DP213: Circle button	DP221: Event for push	DP222: Event for release	DP23: Drawing area	
	FR11: Define line	FR111: Define start	l:setSt art()			neConst		9		۵	ō	□		Δ	
	element	FR112: Define end		JisetE nd()			D:R	ectangle	Constru	ctor					
	FR12: Define	FR121: Define upper left comer			K:set ULCor ner()				— A∗F	lement (Construc	tocal			
lement	rectangle element	FR122: Define lower right corner				LisetL RCom er()			Man						
FR1: Define element	FR13: Define circle element	FR131: Define center					M:setC enter()	型報本		ircleCor	structor		B: Wir	ndow const	market to the
FR1		FR132: Define radius		·				N:setR adius()							7.0
		FR211: Identify line						10 m 10	O:addL line()			F:Cre	ateButto	ns()	
	FR21: Identify the drawing type	FR212: Identify rectangle								P:add Rectan gle()					
_		FR213: Identify circle					13111	o V		10.70	Q:add Circle()		-[G:Mox	useListene	<u>r.</u>]
environmen	FR22: Detect	FR221: Detect mouse push	Messa ge call		Messa ge call K		Messa ge call		isLine Select ed()		isCirci eSelec ted()	AND STATE OF THE PARTY OF THE P			
FR2: Specify drawing environment	drawing location	FR222: Detect mouse release		Messa ge call J		Messa ge call L		Messa ge call N	isLine Select ed()	isRect angleS elected	isCirci eSelec ted()		S:mou seRele ased()		
FR2: Spec	FR23: Draw the ele	ement	getStar LatOEs	getEnd ()	getUL Corner(getLR Comer(getCen ter()	getRad • ius()	is⊔ne Select 'ed()	elected				H:upda	
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FIGURE 29

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Object 23	Canvas										4							
Object 22	Mouse																	
Object Object Object 211/212 22 23	Radio By Mouse Canvas											er						
Object 2	Window_d	DP211 Radiobutton line	DP112 Point end DP122 Point lower right DP132 Double radius DP12 Rectangle r DP212 Radiobutton rectangle	DP213 Radiobutton circle	DP22 Mouse m	DP23 Canvas c	B (Window()	F (CreateButtons()	O addLine()	P addRectangle	Q addCircle()	G implement MouseLisner	R mousePresed()	S mouseReleased()	H draw()	b/c [isLineSelected()	b/c isRectangleSelected()	b/c isCircleSelected()
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Object 13	Circle_d	DP131 Point center	DP 132 Double radius				E Center()	M setCenter()	N setRadius()									
Object 12	Rectangle_d	DP111 Point start DP121 Point upper left	122 Point lower_right [Rectangle()	setULComer()	setLRCorner()									
Object 11	Line_d	P111 Point start DF	P112 Point end DF				C Line() D	setStart() K	setEnd() L									
Object 132		٥	<u>ں</u>	L	L	<u> </u>		<u></u>	C	<u> </u>			<u> </u>	L	Ļ	i	L	
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FIGURE 30

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PV2: W	PV21: buttons	12: Radiobutton class	bΛS			A:aggregation to a		E:aggregation		#743g	P:aggr egation		messa ge	messa ge	<u></u>
	PVZ	11: Radiobutton class	ΡV2			A A		E A		O:aggr egation			messa ge	messa ge	c:message
		32: Donble class	۱۷۹		D:aggregation	,			N:aggr egation			b:message	messa messa	messa ge	C:m
SS	PV13: Circle_d class	31: Point class	۱۸d	Į.	Diag /			M:aggr egation				p:me	messa ge	messa ge 📜	
nt_d cla	10 P ₁	22: Point class	۱۸d	 C:aggregation			L:aggr egation						messa	messa ge*	K.
PV1: Element_d class	a mPW12: Rectangle class	21: Point class	ŀΛd			K.aggr egation					Arre	444	messa	messa * ge	object 2
Ā	Line_d	12: Point class	۱۸d		J.aggre gation								messa	messa * ge	a: aggregation to object 2
	CI CI PV11: Line class	11: Point class	١٧٩	l:aggre gation									messa	messa ge	a:aggre
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1	On-diagonal e intermediate o	Off-diagonal el intermediate o Off-diagonal el or lower level:		DP11: Line	characteristics	DP12: Rectangle	characteristics	DP13: Circle	characteristics		DP21: Radio buttons		DP22: Mouse	DP23: Drawing area	manual our electroscopica, electroscopica manual cur electroscopica, electrosc
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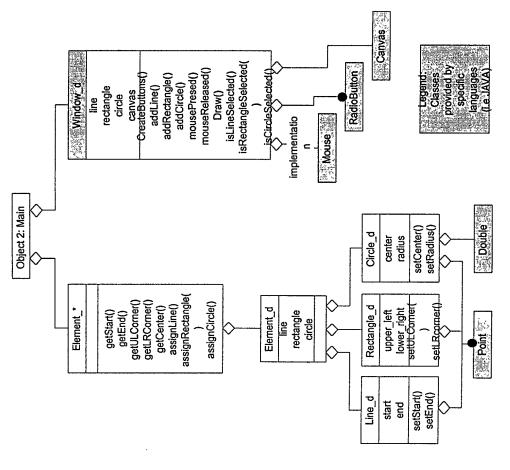


FIGURE 32

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		to the second se		FR111 Define start	FR112 Define end	FR121 Deline upper left corner	FR122: Define tower nght corner	FR131 Deline center	FR132 Define radius	FR211: Identify line	FR21 identify the FR212 identify rectangle drawing type	FR213 Identify circle	FR221 Delect mouse push		FR222 Delect mouse release			
	Ondegons element for the intramectals or higher level	Of Cover level		FR11 Define line	element	FR12. Define	reclangle element	PRI3 PRI3 Peline el	Circle element		FR21 Identify the drawing type		Mironment 707 707 707				FR23 Draw the element	

FIGURE 33

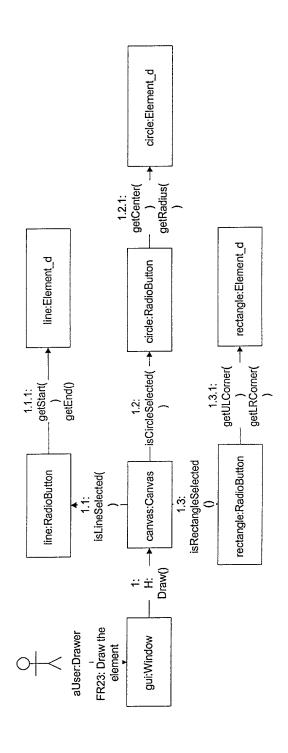


FIGURE 34

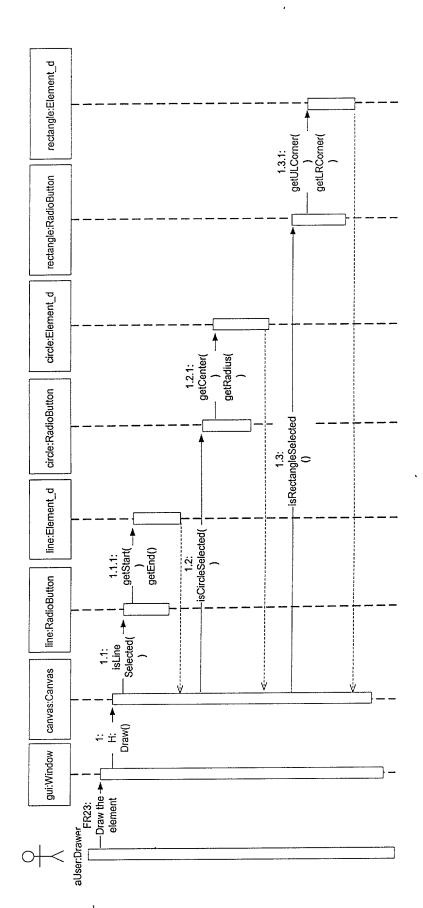


FIGURE 35

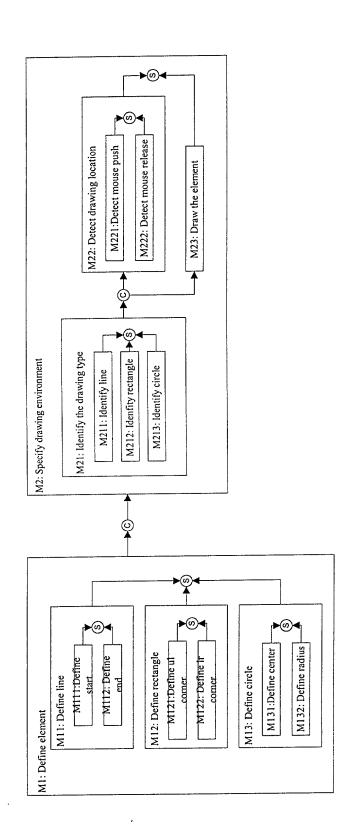


FIGURE 36

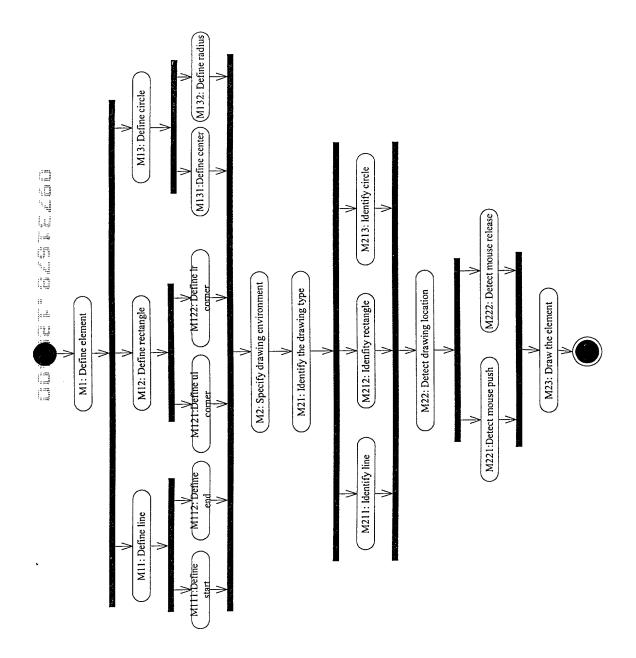


FIGURE 37

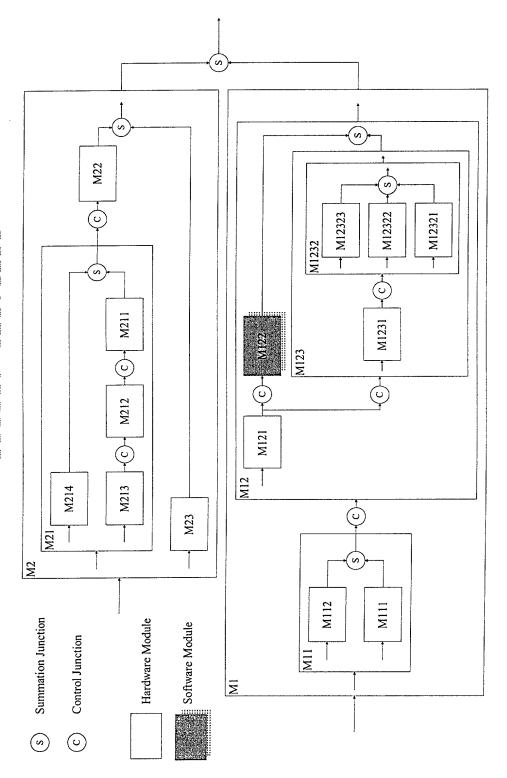


FIGURE 38

FIGURE 39

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Code	Ex-a	EX-a	EX-a	EX-a	EX-a	ЕХ-а	EX-a	EX-a	EX-a	EX-a	EX-a	EX-a	EX-a	EX-a	EX-a	EX-a	EX-a	EX-a	EX-a

FIGURE 40

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FIGURE 41

FIGURE 42

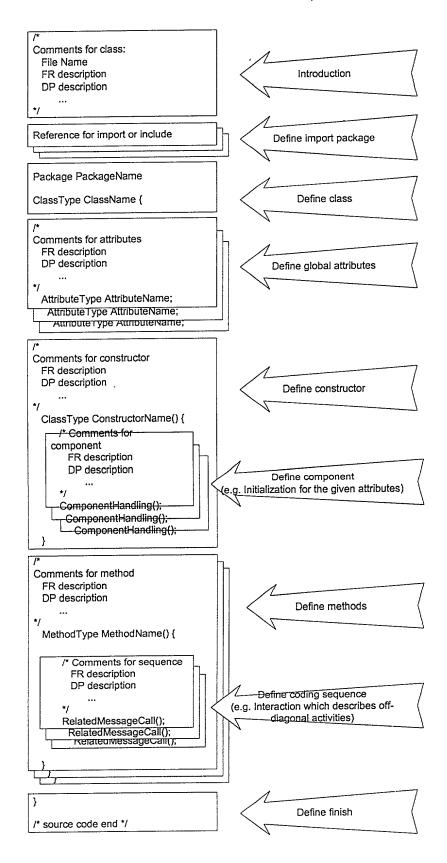


FIGURE 43

```
Comments for class:
                                                      Comments for class:
                                                       File Name: Window d.java
    File Name
    FR description
                                                       FR2: Specify drawing environment
    DP description
                                                       DP2: GUI with window
                                                         FR2 = a*DP1(Element characteristic) + B*DP2(GUI with window)
                                                      import javax. swing.*;
  Reference for import or include
                                                     import java.awt.*;
  Package PackageName
                                                      public class Window_d { /* DP2 */
  ClassType ClassName {
                                                     /* Comments for attributes:
 Comments for attributes
                                                       FR211: Identify line
   FR description
                                                       DP211: Line button */
   DP description
                                                       RadioButton line;
                                                                                  /* DP211 */
                                                     /* Comments for attributes:
   AttributeType AttributeName;
                                                       FR212: Identify rectangle
    AttributeType AttributeName;
                                                       DP212: Rectangle button */
     Attribute i ype Attributename;
                                                       RadioButton rectangle; /* DP212 */
                                                       Comments for constructor:
 Comments for constructor
                                                        FR2: Specify drawing environment
  FR description
                                                        DP2: GUI with window
  DP description
                                                      public Window_d() { /* Element of design matrix: B */
  ClassType ConstructorName() {
                                                        /* Comments for component
       /* Comments for
                                                          FR21: Identify the drawing type
    component
                                                          DP21: Radio button */
        FR description
                                                                           /* Element of design matrix: F*/
                                                        CreateButtons();
        DP description
                                                        /* Comments for component
                                                          FR22: Detect drawing location
      ComponentHandling();
                                                          DP22: Mouse click information */
       ComponentHandling();
                                                        MouseListener();
                                                                            /* Element of design matrix: G*/
        -ComponentHandling();
                                                       Comments for method:
Comments for method
                                                        FR211: Identify line
  FR description
                                                        DP211: Line button */
  DP description
                                                      public void addLine() { /* Element of design matrix: O */
                                                      }
  MethodType MethodName() {
       /* Comments for sequence
                                                    /* Comments for method:
FR221: Detect mouse push
        FR description
        DP description
                                                        DP221: Event for push */
                                                      public void mousePushed() { /* Element of design matrix: R */
      RelatedMessageCall();
RelatedMessageCall();
RelatedWessageCall();
                                                          /* Comment for sequences
                                                             DP213: Circle button */
                                                         isCircleSelected();
                                                                                                   Interaction 221
                                                         /* Comment for sequences
                                                             DP111: Start point */
                                                         Element_*.assignLocation();
                                                     }
/* source code end */
                                                   /* End: Window_d.java */
```

FIGURE 44

1 FR 1 description \leftarrow DP 1 description 2 FR 2 description \leftarrow DP 3 description 3 FR 3 description \leftarrow DP 3 description

FIGURE 45A

FIGURE 45B

DP Information:	on 🥷 📗 Number 🔝 Description	eterfi DP#.1 Angle for flow ra	mper DP#1(f) Angle of hot wat	DP#2 Angle for tempe.	Sample CP#2(1) Connecting to 3	DP# 2(2) Angle of coldw	
FR Information:	Number - Description	FR #.1 Control the water fl.	FR # 2 Control the temper				

Γ	<u> </u>			
DP 1 description	Alternative DP 2(a)	Alternative DP 2(b)	Alternative DP 2(c)	DP 3 description
		~	_	
FR 1 description		FR 2 description		FR 3 description
1		7		3
			FR 1 description FR 2 description	FR 1 description

FIGURE 46A

FIGURE 46B

| Number | Patent Information: | Description | Patent Information: | Description | Patent Information: | Paten

Parent DP description

Parent Parent FR description

FR 1 description

DP 1 description
Alternative DP 2(a)
Alternative DP 2(b)
Alternative DP 2(c)
DP 3 description

FR 2 description

7

FR 3 description

က

FIGURE 47A

FIGURE 47B

#: 1.2.3	딾	P P
Parent	Parent FR description	Parent DP description
#.1	FR 1 description	DP 1 description
		Altemative DP 2(a)
#.2	FR 2 description	Alternative DP 2(b)
		Alternative DP 2(c)
#.3	FR 3 description	DP 3 description



FIGURE 48A

	FR#5	14	\$6è°			es i	E
3 W. S.		×	×	×	×		
· ·	FR #.4	×	×	×	×	×	×
formation:	FR#3	×	×	×	×	X	×
Constraint In	FR#.2	×	×	×	×		
Cons	FR#1	×	×	×	X		
	Descr	Маке	odans	Elimi	Facilit	Funct	Obie
	Num.	C#.1	C#.2	C#.3	C#.4	C#.5	C#.6

FIGURE 49A

	19977	<u>ঠ</u>	Constraints	Kor ∏	oust Design		Uysis 🚬
Index		Γ	Information		Tan	Target Value	
•	Category	Type	Constraints	Comments	Operator	Target	Calculated
1	Critical	Marke	Marke Weight	ž	Less than (<+)	300 lb	
2	Interface	Field	Cost		More than (>=)	\$500	
8	Project	Мапи	Volume	À	Exact (= +/-)	10cn	
1							
	<u>0</u>	5.7	(#.5	5.3	CA's	Γ	
FR#1	×				188		
FR#.2	7 X		×	×			
FR#.3	χ Χ			×			
FR# 4	4 X				7		

FIGURE 49B

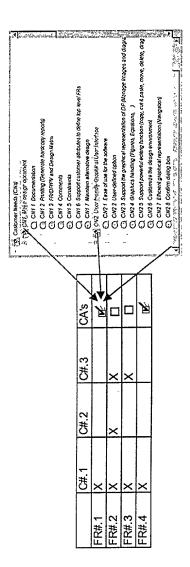
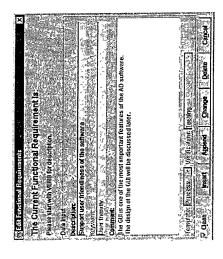


FIGURE 50

Index		-=	nformation		Targ	arget Value	/
#	Category	Type	Constraints	Comments	Operator	Target	Calculated
1	Critical	Marke	Narke Weight	Ä	Less than (<+)	300 lb	
2	Interface	Field	Cost		More than (>=)	\$500	
3	Project	Mann	Volume	Ä	Exact (= +/-)	10cn	
							\

FIGURE 51



	Comment	A software tool for decision maki	Software for Axiomatic Design.	The state of the s	DP Information:	Num - Description Comm	DP #.1 Management ro	DP #.2 Decision-maki	DP#3 Graphkar User 🖫 🐬	DP #.4 Data-managing	DP #.5 Plug-in software	
Parent Information Control of the Parent	Nu.: Description Comment	FR 1 Make a decision-making tool whi A software tool for decision maki	DP 1 Computerized system with the A Software for Axiomatic Design.	A STATE OF THE STA	FR Information:	Num.: Description Comment	FR# 1 Manage desi. The design a	FR#.2 Provide decis The FR dest	FR#.3 Support User 1 Tre GUT 150.	FR#.4 Provide effici 411 kinds of d	FR#5 Provide utility The fundam	

FIGURE 52A

FIGURE 52B

	Information	u	Comment	ment	
Template	FR	DP	뀖	음	App. Link
	Control the FR/DP domain FR/DP window	FR/DP window	周		
	Control the manning	Mapping tab	Œ	B	
	Solition are mapping	Domain tab		翔	
	Assign constraints	Constraints tab			
	Refine the design	Robust design tab	· 20		
	Analyze the design	Analysis tab	j <u>i</u>	Ä	

FIGURE 52C

		DP23	Π											8
	72	DP222	T									纖	X	1,400
2	DP22	DP221					Г					×	腦	
DP2		DP213							滋	機	×	×	×	×
	DP21	DP212								×		X	X	X
	J	DP211							X			X	×	X
	DP13	DP132						X	雄				X	X
		DP131					×	雛				×	變	X
7	DP12	DP122				×						A,	X	X
DP1	占	DP121			Ϋ́							×	瓣	X
	DP11	DP112		X.			L		쀎	囊			×	×
	占	ווושם	X	凝	L	L				쮍		X		×
			FR111	FR112	FR121	FR122	FR131	FR132	FR211	FR212	FR213	FR221	FR222	
			ED11		FD12	7111	FD13			FR21		CCCI	1 1 12 2	FR23
					15	11					25	ЬĿ		

FIGURE 53

🛨 Design Matrix | 😵 Analysi

()=() FROP

| Design Matrix Table: | De#1| | DP#5 | DP#5

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00×

×

FR#.1 FR#.2 FR#.3 0

00

FR#.4 FR#.5

FIGURE 54B

FIGURE 54A

Robust Design 🖄 Analysis Comment	FR DP App. Link	ZE CO	190 190			A			DP#.2(b) DP#.3 DP#.4	~ `		×	
Instraints	- OB	Control the FR/DP domain FR/DP window	Mapping tab	Domain tab	Constraints tab	Robust design tab	Analysis tab	_	DP#.2(a) DP#.2		×	×	
5 2	ate FR	Control the FR/DP do	Control the manner	Sinddain oin ionno	Assign constraints	Refine the design	Analyze the design		DP#.1	×	×	×	:
Mapping Index	# Template	Parent		-	2	3	4			FR#.1	FR#.2	FR#.3	

FIGURE 54C



FIGURE 55A



FIGURE 55B

DP3.5.5: Status bar	How to:
DF5.5.7: Aerial View	DP3.5.6: Scrolling Theorem/Corollary
DP3.5.4: Legend Display	
To do List	
DP3.5.3:	
Questions	
Design	Sub-level DP3.4 (e.g. FR/DP domain)
X回- 型X	
	Sub-level DP3.4 (e.g. CA domain)
	X 🗗 - 188
	DP3.3.3: Domain Toolbar
	DP3.3.2: Standard Toolbar
	File Edit View Tools Navigation Document Examples Window Help
XD ⁻¹ · · · · · · · · · · · · · · · · · · ·	

FIGURE 56

Material Control of the Control of t			X四-I
File Edit View Tools Navigation Document Examples Window Help Animating Image	tion Document Examples	Window Help Ani	imating Image
Cur Database 1/0 DI	DP3.3.2: Standard Toolbar		
□ New Ctrl+N D	DP3.3.3: Domain Toolbar		
Den Cul+O			
€ Glose Hall Hall			
Close <u>A</u> li			
ESave : Ctrl+S			
Sa <u>v</u> e As			
Save All	DP3	DP3 4: Multi window frame	v frame
Sprint Ctrl+B			211111111111111111111111111111111111111
1. Faucet			
2. Refrigerator			
'EXIC			
How to:		DP3.5.5: Status bar	us bar

FIGURE 57

Z Z)=() Mapping	O Constraints	raints		Nobust Design			Amalysis ==	
Index	_	Anl	Information	c		S	Comment		Design
#	Template	æ			P P	Ħ	占	App Link	Orgentions
Parent	ıt	Control the FR/DP domain FR/DP window	lomain	FR/DP wil	wopu	È	_		Kucstions
\mathbb{H}		Dojudew og jewico		Mapping tab	ab	æ	je j	Section 2 Contracts	
				Constraints tab	ž.		1	SALES AND LABOR	
~	<i>T</i>	Assign constraints	1	Biologica	Cipi Gillio (GC)	ο,	1 10	素をはない	
- 668 - 668 - 6		Refine the design	1	Robust design tab	sign tab	Ä	- W		DP3.5.3:
4		Analyze the design		Analysis tab	s tab	1	B		To do List
		DP#.1	#d0	DP#.2(a)	DP#.2(b)	DP#.3		DP#.4	7 PB 64.
FR	FR#.1	×			,				Legend Display
F	FR#.2	×	×		×		-		
E	FR#.3	×			×	×			
FR	FR#.4	×				×	×		
									DP3.5.7:
sure	of Cou	Measure of Coupling:		Ess. 1	Information Contents: [ontents			Aerial View
		77.44	,		1 5 5 mm				_

FIGURE 58

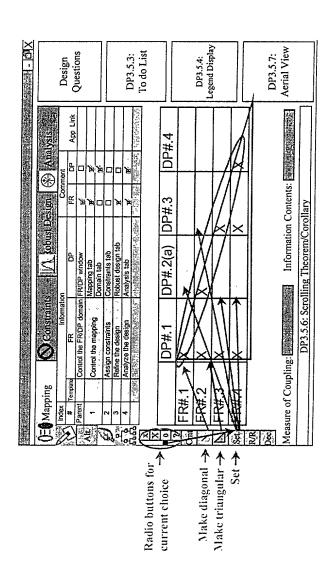


FIGURE 59

Ğ		ls this step	step				Resourc	Resources for control		
Ź	Roadillap	finished?	led?	Menu	Tab	Toolbar			Buttons	
		Yes	2			5	In Mapping tap	In Constraint tab In Analysis tab	In Analysis tab	In Robust Design
Start the	Start the design process	j. j		View -> Project Control	Constraints, Robust design, Analysis	Project Control				
,	FR/DP mapping	Enable	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	And the second s	Ender the result.		One step design matrix control buttons			
Activities at			Disable				Decompose			
one level of the design hierarchy	Define Design	Enable			Analysis		Decompose		Flow Chart, Impact List, Check consistency	
	Matilx	h-md	Disable						Flow Chart, Impact List, Check	
Activities over the design	Define leaf level	Enable		View -> Project Control	Robust design	Project Control			Check Constraints, Audit	
hierarchy			Disable						Check Constraints, Audit	

FIGURE 60

Index	E Mapping	O Constraints) ugis	E IV	lysis	
5		Information		Comment	Then!		Dec: 22.
*	Template	FR	PP	Œ	2	Ann Link	igisar (
Parent		Control the FR/DP domain FR/DP window	FR/DP window	ì	0	and de	Questions
-		Control the manning	Mapping tab) ja	'n		
1		A	Domain tab		1		
7			Constraints tab		c		
6		Γ	Robust design tab	×			
4		Analyze the design	Analysis tab	>	>		200
<u>.</u>	1	はいいするなな機能のある。	である。 ないない 大学を	STATE OF THE PERSON NAMED IN	· , ;	By Sales John	Dr3.3.3:
××		(—					To do List
0		DP#.1 DP#	DP#.2(a) DP#.2(b) DP#.3	DP#.3	Γ	DP#.4	
FR#.1	_	×					
FR#.2	2	×	×		+		7 5 64 6
FR#.3	3	×	×	×	+		Legend Display
FR#.4	4	×		×	×		· •
Set							
~ 1:		Additiona	Additional blank row				-
8							DP3.5.7:
easure of	, Co	Measure of Coupling:	Information Contents:	ontents:			Aerial View

FIGURE 61

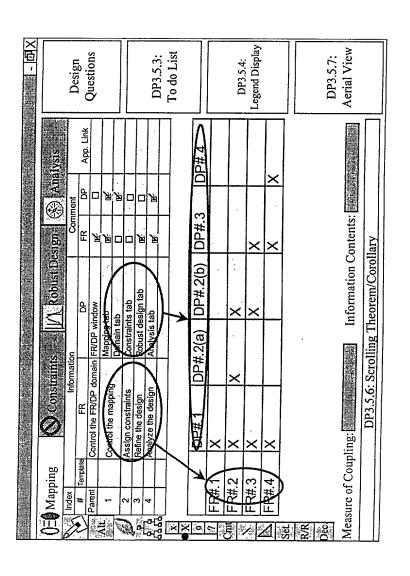


FIGURE 62

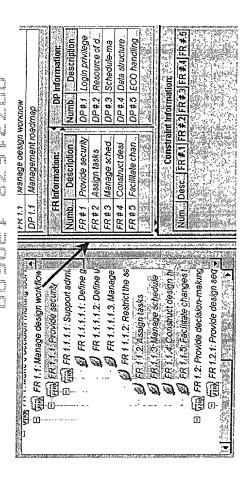


FIGURE 63A

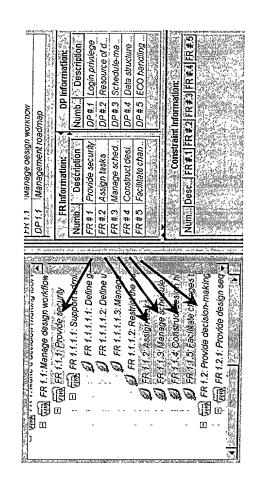


FIGURE 63B

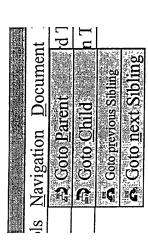




FIGURE 64

				Level 1	Level 2		Level 4	
Contro	l Item			Beginner		Intermediate	<u> </u>	Expert
		FR	/DP Mapping					
		De	sign Matrix					
		Alt	ernativ DP			•		•
		An	alysis-Flow Chart					
		Co	nstraints			•		
		Co	mments					
		CN						
ĺ	Available Features	CN	/FR Mapping			•		•
	af.	An	alysis-Child List			•		•
	Ψ.	An	alysis-Impact List			•		
	<u>e</u>	DP	/PV Mapping					
	iat		alysis-Check Consistency					•
	(A		alysis-Check Constraints					•
	∢.		nplates					6
			rification					•
		Ap	plication Link					•
			alysis-Audit					•
			sted(Full) Matrix Handling					•
			bust Design					•
			ject Control					•
	File Menu		abase I/O				9	-
_		CN	Domain			0	0	®
шe		FR	/DP Domain	•	0	<u> </u>	•	0
d it	View Menu	DP	/PV Domain	¥			(A)	®
Automatic Menu Control (Enables the marked item)		Nes	sted (Full) Matrix					0
			ject Control					(8)
			play Configuration Manag	9	0	(4)	®	•
			mbering		•	®	•	(4)
			sign Matrix		9	•		•
			play Color		•	•	•	(9)
			sign Matrix Color		•	0		0
ıtıc	Dueference Monu	GU	I Display			0	•	
Sor	Preference Menu		Location					9
חַ (Res	source				0	(4)
/ler		Dat	tabase I/O				3	@
atic Me		Ter	nplates				-	*
		Coi	nstraints				•	
tou		Ver	rifications					9
An		PV	Tree Diagram				(4)	()
	Document Menu		sted(Full) Matrix					(a)
ø.			Tab	a				
Ĕ			pping Tab		8	(•	
Automatic Window Control (Displays the marked item)			nstraints Tab			Ŏ	0	ě
ğ			oust Design Tab			¥	¥-7	•
ا رق			Flow Chart Tab		•	6	0	9
흔	FR/DP Window	ap	Child List Tab		-		0	Ø
ndow Control marked item)		Analysis Tab	Impact List Tab			9	9	0
ಕ್ಷ ನ		Şi	Check Consistency Tab				9	Ø
> 품		na	Check Constraints Tab				8	9
<u> </u>		₹	Audit Tab				-	8
₹	CNIMindow	<u> </u>	Ludir Ian				_	0
읉	CN Window					8	<u> </u>	•
ä	DP/PV Window	in-1.					9	
왉	Project Control W							•
<	Nested (Full) Des	ign I	viatrix vvindow				ليب	9

7月 口 图	四 () #	
Upper case Alternative connector	Upper case Alternative connector Parent index	Upper case Alternative connector Parent index Divider
Alte		Alte Indicator Pare Divic

FIGURE 66

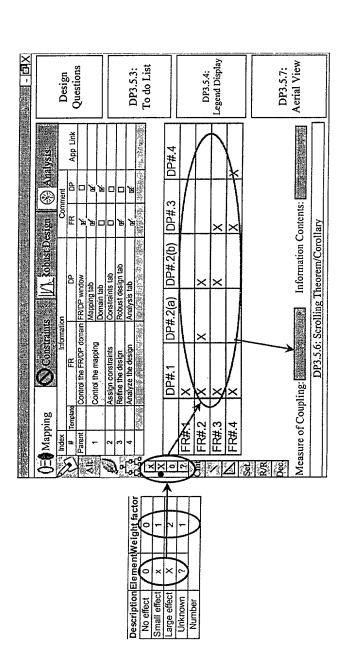


FIGURE 67

		Legend category	egony	
	•	Color	Font	Line
	Activited cell	,		N/A
	Normal			
	Default			N/A
Display	Focus			N/A/A
Uspiay	Alternative			N/A
	Redundant			N/A
	Constraints			N/A
	Comments			N/A
	Peldnooun		N/A	
Design Matrix	Decoupled		N/A	
NING INCOME	Coupled		N/A	
	Penilebu		N/A	
	Process			
Template	Transport			1 1
	•••			

FIGURE 68



FIGURE 69

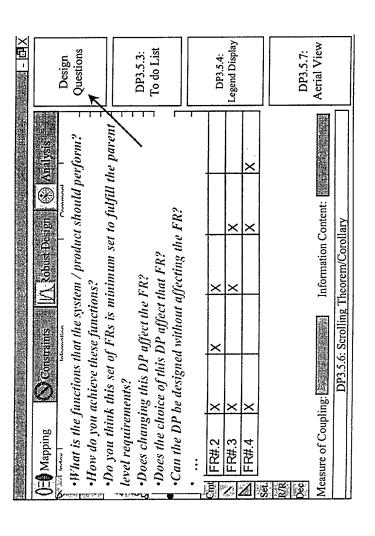


FIGURE 70

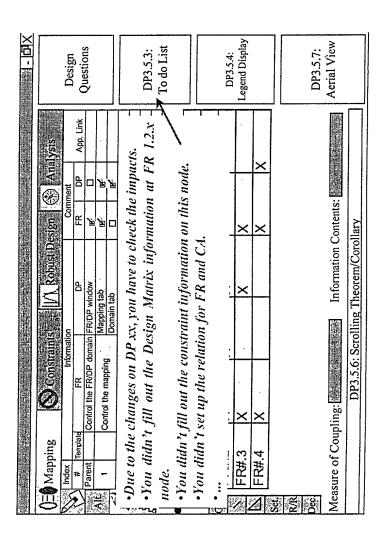


FIGURE 71

X	Change	Cancel		DP Ranking Assumptions	•	90	. I ree association of DPs		- Cet Rank Combination		Display Options	6			C Keyword			Tiblead wyorking	Uncoupled Design	D Decoupled Design	Coupled Design	Allemative DF	Redundant DP	では、一般の一般の一般の一般の一般の一般の一般の一般の一般の一般の一般の一般の一般の一
		DP: #2(1)	0	×			Freat lange Sequence:	Xs 🗀 🗀 Rearranged FR Order	No Rearrange	FR: 1 - FR: 2 -	FR: 2 - FR: 1 -								able:	DP#1-DP#1(1) DP#2 DP#2(1) DP#2(2)	X	<u> </u>		ACT CONTROL OF STREET,
Matrix combination	ormation: 💮 👙	DP:#1		(, k		Status : Off X's Coupled X's	ed 0/4 me	ed 0/4 m/a	ed 1/4 Na	ed 1/4 N/a	ed 1/4 N/a	2/4 1		大き ないない			Design Matrix Table	2 #.1 * DP #.1(1) * DP	7	×		Section of the sectio
🖼 Rank/Rearrange the Design Matrix combination	Matrix Information;	A0(i,)						FR:#.2	DP # 2(1) UnCoupled	DP. #.2 UnCoupled) DP # 2(1) DeCoupled) DP: #.2 DeCoupled	DP # 2(2) DeCoupled) [DP # 2,2] Coupled	4					(I) (I) DI	×	0 83.55		The state of the second section of the second
色 Hank/	51		13.50	[FE # 2		denger govern		FR: #.1	DP: #.1	DP: #.1	DP # 1(1)	DP # 1(1)	DP: #.1	0) # 4(0			ì	g.						Child Canada

FIGURE 72

Child List	Child List Impact List Inconsistency Decoupling	
Number	Number FR Description	Comment of the Description of the Comment of the Co
1,1	Manage design workflow	Management roadmap
1.1.1	Provide security	Login privilege
1.1.2	Assign tasks	Resource of design activity
1.1.3	Manage schedule	Schedule-managing tool (e.g. MS Project)
1.1.4	Construct design hierarchy	Data structure for Axiomatic Design concept
1.1.5	Facilitate changes to the design	ECO handling tool
1.1.1.1	Support administrative tool	User manager
1.1.1.2	Restrict the security access level Authority code	Authority code
1.1.1.1.1	Define group	Group specification
1.1.1.1.2	Define user	User specification
1.1.1.1.3	1.1.1.1.3 Manage authority code	Authority code specification
		では、「大きない」では、「ちない」では、「ちない」では、「ちない」では、「ちない」では、「ちない」では、「ちない」では、「ちない」では、「ちない」では、「ない、「ない」では、「ない」では、「ない」では、「ない」では、「ない、「ない」では、「ない」では、「ない、「ない、「ない、「ない、「ない、「ない、「ない、「ない、「ない、「ない

FIGURE 73

FR # 1	OP#1 R4 S DP#2 X X X X X X X X X X X X X X X X X X	DP#3 %%	X X X X X X X X X X X X X X X X X X X	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
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FR # 2	X X 0 0	Dees scription		X O O O O O O O O O O O O O O O O O O O
FR#3 X FR#4 X FR#5 O FR#5 O ChildList Impact List Impact List I 4.1 Support data file 1.4.2 Support data and 1.4.2 Control error classification 1.4.2 Control error class	X	Dees scription		X X X Consider Date
FR # #	O O O O O O O O O O O O O O O O O O O	1		O
Child List (Impact List) Child List (Impact List) Number FR 14.1 Support data file 14.2 Support databas 14.2.1 Provide consistent 14.2.2 Control error du 14.2.3 Convert data fron	O O O O O O O O O O O O O O O O O O O	18 18 18 18 18 18 18 18		X <u>Get.</u> Date Otsplay Ordini
Cridic List (Impact List) Number FR 14.1 Support data file 14.2 Support data sile 14.2 Control error day 14.2 Control error day 14.2 Control error day	ntuinsstein or a partie of the confidence of the	mil		Get Dave
Child List Impact List Number FR Number Support data file 14.2 Support data base 14.2 Provide consistent 14.2 Control error day 14.2 Control error day 14.2 Convert data from 14.2 Convert data from	noonsistency Decoupli	ID File bendling		Osplay Option
Number 333 Section 14.1 Support data file 14.2 Support databas 14.2.1 Provide consiste 14.2.2 Control error dug 14.2.2 Convert data from 14.2.3 Convert data from 14.2.3		og var DP-Bascription File bendling		Display Options
4 2 8	FR Description Same	File bendling		final de la companya
2 2 3			239	<u> </u>
		Database handling		
	Provide consistency during data read a	Data file format	200	Description
	a readwrite	Exception handling	S888	1 4
	Convert data from old version	Data file converter		III Dawfail (
1.424 Read Data		Method for read	0000	Colors
1.4.25 Write data		Method for write		Uncomplet Design
1.4.26 Provide utility to	Provide utility to deal with the program	Method for utility	1000	Neformled Design
15 Provide utility function	nction	Plug-in software	5000	Compled Decision
1.5.1 Handle external applications	applications	Standard interface for external appli	nal appli	
1.5.2 Teach the axiom	Teach the axiomatic design concept	Education software		
1.5.3 Simulate the sys	Simulate the system architecture	Simulation Software		
154 Drawthe Design	Draw the Design Parameter figure	CAD Software		Has Comment
1.55 Analyze the syst	Analyze the system performance	Analysis software (i e ANSYS, NAS	S, NAS	
13 Sunnort user frie	ndliness of the software	Sunnot user friendliness of the software Granhical User Interface software	fresh	T P

FIGURE 74

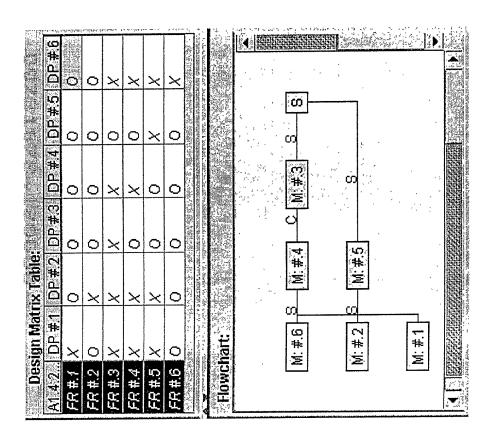


FIGURE 75

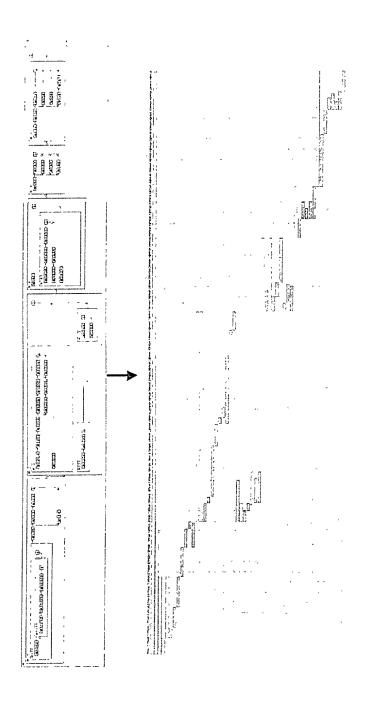


FIGURE 76

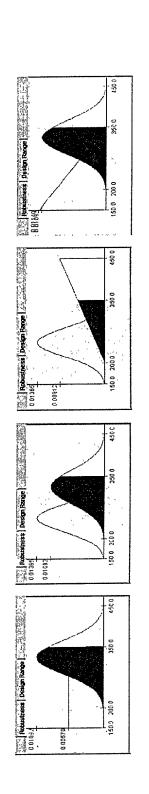


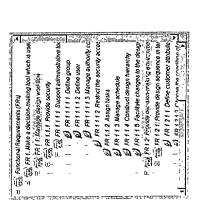
FIGURE 77D

FIGURE 77C

FIGURE 77B

FIGURE 77A

FRID Index: 1	FR/DP Table											100 100 100 100 100 100 100 100 100 100
ē	Name	Functiona	1 Requir	Functional Requirements (FRs)		Design Parameters (DPs)	arame	sters	S _O		Verification	2 4 <u>1 t</u>
a:												
-	Process	Manag	gesign	Manage design workflow		Management roadmap	ment	road	тар		Testing	
2	Process	Provid	e decision-m environment	Provide decision-making environment		Decision-making criterion	in ak	D DC	terior	_	Testing	
3	Process	Support u	ser friendli software	Support user friendliness of the software		Graphical User Interface software	al User In software	r inte	rface		Testing	
4	Process	Provid	e efficie	Provide efficient data VO		Data-managing software	nagın	9 50	tware		Testing	
3	Process	Prov	de utility	Provide utility function		Pluç	Plug-in software	ftwar	gu		Testing	
otal	Total Design Matrix Information	Matrix In	forma	rtion								
	DP.#.1	DP.#.2	DP.#.3	DP.#.4	DP.#.5							
FR.#.1	*.1 ×	0	0	0	0							
FR.#.2	#.2 ×	×	0	0	0							
FR.#.3	*.3 ×	×	×	×	×							
FR.#.4	#.4 ×	×	ο,	×	0							
FR.#.5	#.5 O	0	0	×	×							
Rela	Related Constraints	straints									•	
§ ∙	Parent	Keyword	<u> </u>	Description	—	Comment	1 2	~	44	NO.	Verification	Page Information
_	Designer	Impact	-	Make Impacts	9		 	1.	Ŀ		Testing	Document Format
7	Marketing	Speed		Support running as fast as possible	X		•	•	•		Testing	F ROPPV Comment
6	Designer	Bna	ū	Eliminate bugs	2			·	·		Testing	Constraints
4	Marketing	External Application	 	Facilitate use with external applications	0			<u> </u>	•	 -	Testing	C Defaut Display
٠,	Marketing	Multi-platform	orm o	Functions across platforms	ļ				•		Testing	Fig. 5 In Display



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DP 144

FIGURE 79A

FIGURE 79B

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()⊑ ∮ Mappin	0	O Constraints	W. Robust D	A Robust Design A Analysis	Analysis		
	DP#.1	DP#.2(a)	DP#.2(b) DP#.3	DP#.3	DP#.4	Design	; ہے
FR#.1	×					Successions	S
FR#.2	×	×	×				
FR#.3	×		×	×		DP3 5 3.	;
FR#.4	×			×	×	To do List	ist
Flow Chart E. Condituist F. Chock Consistency Check Consistency Check Constraints Audit		Check my design: - Is the design completely uncoupled/decoupled? - Does it satisfy Constraints? - Are there any unchecked CN'x? - Has everybody done consistency check? - Does the default design have the least information? - Are all the leaf nodes checked as leaf?	n: completely un y Constraim af DP have o v unchecked ty done com ty done com af nodes cha	coupled/dec is? a drawing? i CN's? sistency che iave the leas	oupled? ck? st informatio		3.5.4: 1 Display 1 Display 3.5.7:
	DPS	DP3.5.6: Scrolling Theorem/Corollary	Theorem/Corc	ollary			
				,			

FIGURE 80

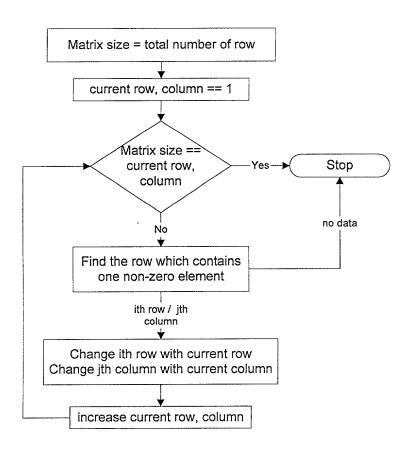


FIGURE 81

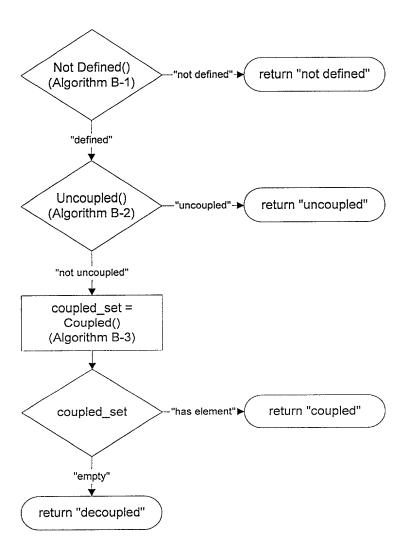


FIGURE 82

FIGURE 83

FIGURE 84

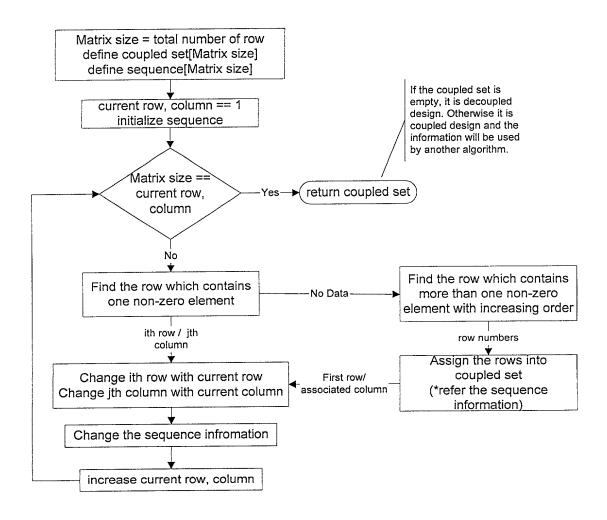


FIGURE 85

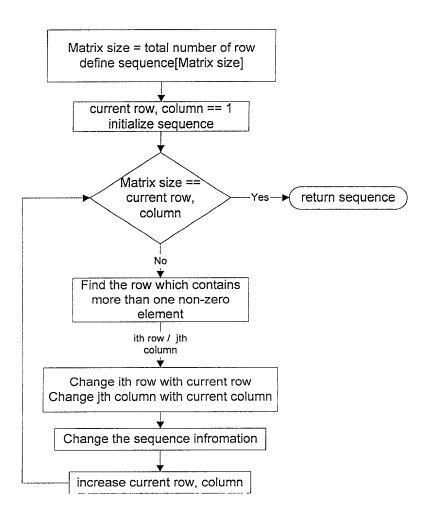


FIGURE 86

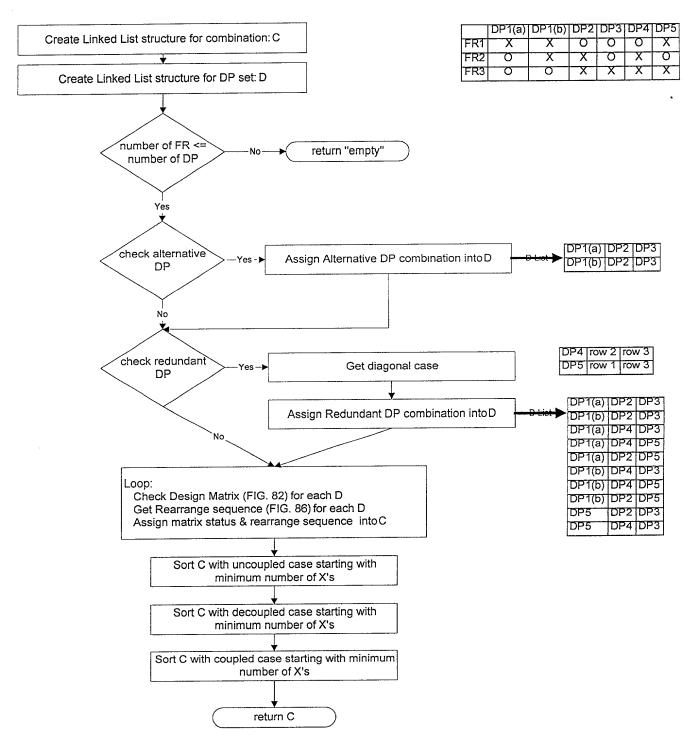


FIGURE 87

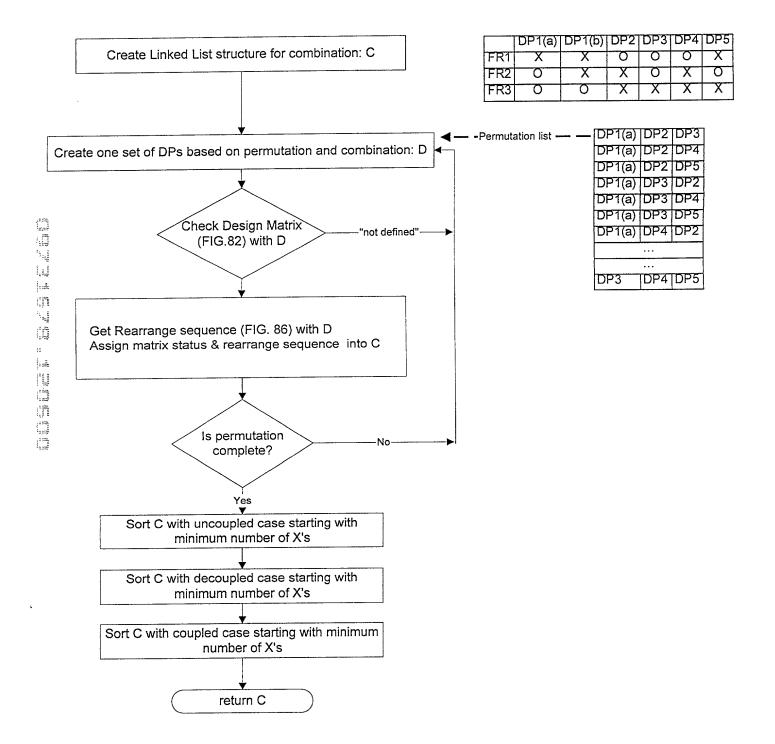


FIGURE 88

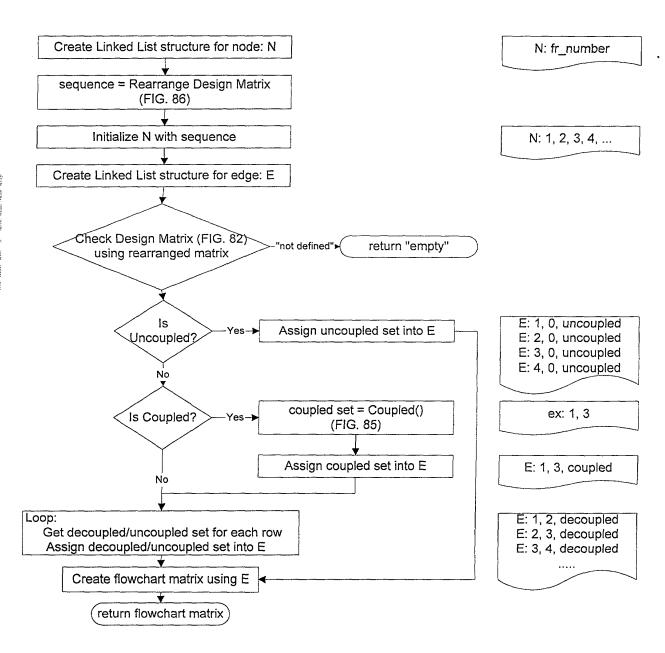


FIGURE 89

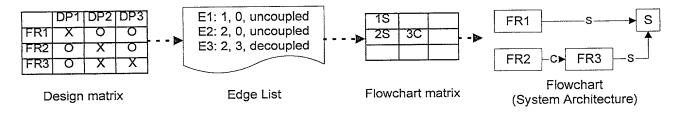


FIGURE 90

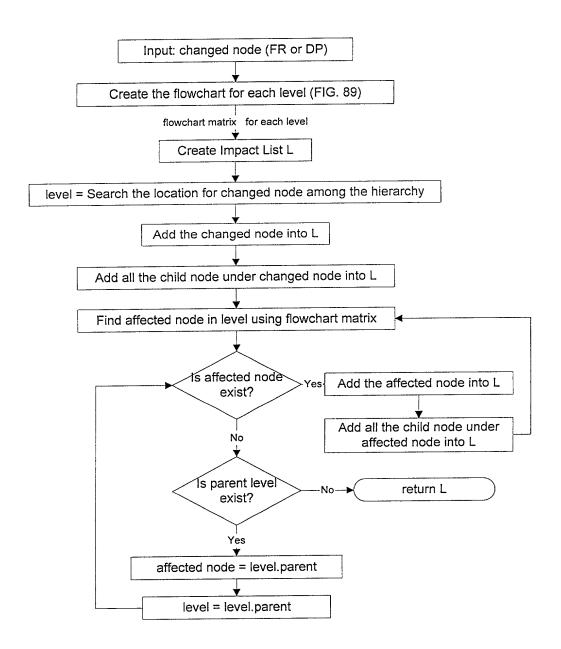


FIGURE 91

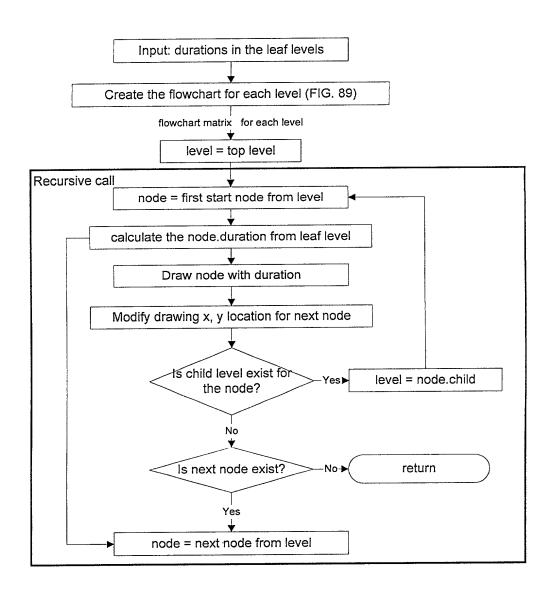


FIGURE 92